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98-153

August 18, 2000

Submission Re: Docket ET-98-153
On Ultra Wideband Operations

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Ms. M. R. Salas, Head Commissioner
Federal Communications Commission
445 Twelfth Street, SW
Washington DC 20554

Dear Head Commissioner:

In response to the FCC's NPRM on ultra wideband (UWB) operations, I am writing to support immediate and continued experimental and commercial activities in this arena. Moose Hill Enterprises, Inc. is a young (6 years), small (2 person) company specializing in East-to-West technology transfer in the fields of electronics and optics. Some of the scientists whom we represent and assist are developing new technology in the field of UWB, including switching devices, signal processing software, and antennas. Our strategy is to partner with a major US UWB company, in both technology transfer and joint development efforts – both scientific invention and practical implementation.

The technologies and applications being worked on by our colleagues related to both low power and medium power UWB systems. Some of these might be utilized in short range "radio"[1] communications, others in longer-range transmissions including ground penetrating radar[2] and other detection and imaging applications.

One internationally vital application for UWB technology is in locating buried land mines with high efficiency and accuracy. Our Russian colleagues have potentially breakthrough concepts and developmental hardware for this challenge. This issue places the USA in an unusual humanitarian position: a) we have virtually no buried land mines on US soil to pose a constant threat to limb and life, and b) innocent children are as likely as adults to be land mine victims.

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[1] Webster's defines "radio" thus: "*n.* 1. A system of telecommunication employing electromagnetic waves of a particular frequency range to transmit speech or other sound over long distances without the use of wires." If one changes the word "sound" to "information" and deletes "long", then this definition becomes largely correct. Clearly UWB calls many assumptions into question and thereby poses new challenges for the FCC, in rulemaking, enforcement, and other areas of its purview or phase-space.

[2] This is also something of a misnomer, as "radar" was created as a shorthand of "radio detection and ranging"; we have adopted the phrase Underground Imaging System, i.e. UIS instead of GPR.

The FCC should take a far-sighted, international leadership position in UWB, otherwise the USA could be in danger of being a follower in domestic commercialization of UWB technology. Other countries – Russia and China may prove valid examples – could allow wide-scale implementation of UWB systems in locations where landlines do not presently exist for telephone and other communications. With the many superior attributes of UWB systems (I am sure other responders to this docket will inundate you with technical detail) why would a national telecommunications planner choose any other system when they can "leapfrog" other technologies and get the best and latest?

In summary, I urge the FCC to take a courageous and pioneering position that will keep the USA at the forefront of creative invention and commercial implementation of UWB technology -- in the most ultra-wide way. Please let me know if I might support the FCC's rulemaking or other initiatives in any way.

Sincerely,

Bernard P. O'Meara

Bernard P. O'Meara
President